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ABSTRACT

This document describes a study that examined several factors to determine their influence on student social bonding to school, to peers, and to teachers. The study focused on factors related to students' personal and social backgrounds, school organization, and students' relationships with teachers and peers. Specifically, the researchers sought to determine the extent to which particular demographic and organizational characteristics of middle level schools as well as demographic characteristics of middle level students influence student social bonding. Characteristics examined include the student's racial or ethnic group, socio-economic status (SES), and family composition, SES of the school, and the relationship of school organization (teamed and non-teamed) to student social bonding. The study was guided by four questions: (1) Does a student's ethnic group, family SES, and family composition have an effect on middle level student social bonding to peers, to teachers, and to school? (2) Does school organization (teachers and students organized into interdisciplinary teams or traditional nonteamed situations) affect student social bonding? (3) Is there an interaction between student characteristics associated with educational disadvantage and school organization (teamed or nonteamed)? and (4) Does the SES of the school affect the relationship between social bonding and the other explanatory factors? The study suggests that interdisciplinary teaming appears to have the strongest impact on student teacher relationships in low SES schools. Organizing teachers into interdisciplinary teams provides conditions that may reduce the alienation of teachers. Empowered, supported teachers are more likely to provide support for their students. (DK)

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Interdisciplinary Teaming in the Middle Level School: Creating a Sense of Belonging for At-Risk Middle Level Students

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Interdisciplinary Teaming in the Middle Level School: Creating a Sense of Belonging for At-Risk Middle Level Students

A major factor related to poor school performance and early school leaving is the lack of connectedness experienced by students between students and their school, between students and their teachers, and between students and their peers (Byrk & Thum, 1989; Fine, 1991; Finn, 1989; LeCompt & Dworkin, 1991; Natriello, McDill & Pallas, 1990; Wehlage, Rutter, Smith, Lesko & Fernandez, 1989). Studies of dropouts indicate that they believe that no one in school cares about them (Brice-Heath, 1982; Deyhle, 1992; Erikson, 1984; McLeod, 1987; Phillips, 1972; Fine, 1991). They believe that school is boring because teachers do not involve them in engaging work (Deyhle, 1989; Fine, & Zane, 1989; Hess, Well, Prindle, Liffman & Kaplan, 1987; McLeod, 1987, Powell Farrar, & Cohen, 1985; Valverde, 1987; Williams, 1987). Many studies cite organizational structures such as departmentalization which requires students to move from teacher to teacher throughout the school day as factors which inhibit students from bonding with individual teachers.

Indeed, large numbers of students are so alienated from school that they mistrust any school activity as meaningless to their current lives and future success (Bennet, 1986; Richardson, Casanova, Placier, & Guilfoyle, 1989; Whelage, Rutter, Smith, Lesko & Fernandez, 1989). Studies of school culture indicate that the atmosphere of many public schools results in feelings of estrangement, not only between teachers and students, but between students and their peers. Goodman (1992) writes of teachers and students who spend much time together, but whose relationships remain formal

and superficial, creating what some have referred to as a "society of strangers" (Gee, 1989; Givon, 1979; Heath, 1983; Lesko, 1988). Roles and relationships are stratified and the language which dominates the interpersonal dynamics of the school are notions of management, control, and discipline, "concepts common to groups of strangers rather than to people who are working together as a community" (Goodman, 1992, p. 95). Newmann, Whelage, and Lamborn (1992) further argue that for many students, "schooling signifies institutional hypocrisy and aimlessness, rather than consistency and clarity of purpose; arbitrariness and inequity, rather than fairness; ridicule and humiliation, rather than personal support and respect; and...failure, rather than success. For others...school is seen as a theater of meaningless ritual" (p. 19).

If students are to psychologically invest themselves in the hard work of learning and mastery, that is, if they are to become academically engaged, they must perceive the school to be a worthwhile investment of their time and energy. They must feel that they are valued members of their school. The institutional condition that is a prerequisite to academic engagement has been called "school membership" or "social bonding" (Newmann, Wehlage, & Lamborn, 1992; Wehlage, Rutter, Smith, Lesko & Fernandez, 1989).

According to the theory of school membership, bonding or sense of membership develops when students are able to make affective, cognitive, and behavioral connections to their school. Young adolescents have a strong need to feel that they belong, to be accepted as they are, and to play an active role in the lives of their family, friends, classmates, school and community. Those who feel this sense of attachment, commitment, involvement and belief in the

values of the institution are likely to develop a sense of social and psychological bonding to their school, their teachers and their peers (Hirschi, 1969; Wehlage, Rutter, Smith, Lesko & Fernandez; 1989; Newmann, Whelage, and Lamborn, 1992).

Bronfenbrenner (1986) and others have suggested that the forces that cause the alienation of young adolescents are considerable and that they are growing. As the ties between social institutions of family, community, and children are weakened, schools can be a significant source of nurturance and direction for children. Young adolescents during the middle school years are particularly vulnerable to feelings of alienation. As they try to develop a sense of identity of their own, they often withdraw from parents and look toward peers and other adults as a source of support.

Adolescent alienation contributes to school problems such as violence, vandalism, absenteeism, poor achievement and ultimately, withdrawal from school (Bronfenbrenner, 1986; Calabrese & Seldin, 1987; Carnegie Task Force, 1989; Elliott & Voss, 1974; LeCompt & Dworkin, 1991; Newmann, 1981). Newmann (1981) and others stress the need for structuring schools to reduce alienation as a means to increase the engagement necessary for learning.

Conditions that Promote Social Bonding

Achieving membership in school is a complex process because student experiences in school and the way those experiences are interpreted by students are affected by many factors, often beyond the control of individuals teachers or even an entire staff. Newmann, Whelage, and Lamborn (1992) suggest that schools consider the following factors when

addressing concerns of bonding and membership: student's personal and social background; the district and community context; school culture; school organization; curriculum; teachers' background and competence; and, teacher-student interaction, in and out of class.

In this study, we examined several of these factors to determine their influence on student social bonding to school, to peers and to teachers. We focused on factors related to students' personal and social backgrounds, school organization, and students' relationships with teachers and peers. Specifically, we sought to determine the extent to which particular demographic and organizational characteristics of middle-level schools as well as demographic characteristics of middle-level students influence student social bonding. We also wanted to determine the interaction between student factors and school factors for a combined effect on student social bonding.

The demographic characteristics of students that we examined are those associated with educational disadvantage: students' racial/ethnic group (White, Black, and other), students' socio-economic status (working class, lower-middle, and upper-middle), and family composition (two-parent, one-parent, and other). We also took into account the socio-economic status of the school (low SES and high SES) to determine the over-all impact of the school's socio-economic status on the relationship between student personal and social background and school organization. Finally, we examined the relationship of school organization (teamed and non-teamed) to student social bonding.

Research Questions

Our study was guided by four questions. First, does a

student's ethnic group (Black, White, and other), family socio-economic status (working class, lower-middle class, and upper-middle class), and family composition (two-parent, one-parent, and other) have an effect on middle-level student social bonding to peers, to teachers and to school? Second, does school organization (teachers and students organized into interdisciplinary teams or traditional non-teamed situations) affect student social bonding? Third, is there an interaction between student characteristics associated with educational disadvantage and school organization (teamed or non-teamed)? Finally, does the SES of the school (high SES and low SES) affect the relationship between social bonding and the other explanatory factors identified for study.

We know that student personal and social background characteristics play an important role in social bonding. Comer (1986) writes of the "social misalignment" between home and school that is typical in immigrant or minority communities. Others refer to the discontinuity between home and school that impairs relationships among children, teachers and their families. For example, teachers whose personal and social backgrounds differ from those of their students may misunderstand their students' behavior and approach to school. The literature on teacher expectations and student achievement indicates that teacher expectations of students whose family structure, ethnicity, and social class differs from their own may have a negative impact on student achievement. The resulting mistrust and alienation are difficult to overcome (Comer, 1988).

School organization is also an important factor to consider in its effect on student social bonding. Interdisciplinary teaming, the organization of teachers from different disciplines with students into "teams" or "houses"

is considered the cornerstone of middle school reform. Middle school reformers advocate the reorganization of middle-level schools into interdisciplinary teams as a means of creating close, stable relationships between adults and students (Alexander & George, 1981; Arhar, 1992; Carnegie Task Force, 1989; Epstein & Mac Iver, 1990; George & Oldaker, 1985; Johnston & Markle, 1986; Merenbloom, 1986). Teaming is proposed as a means to reduce the alienation and anonymity so pervasive among young adolescents who are at-risk of school failure and withdrawal from school (Arhar, Johnston & Markle, 1989; Carnegie Task Force, 1989). Anticipating that teaming will produce conditions which prevent early school leaving, more middle schools with at-risk populations use teaming than do schools with a predominance of educationally advantaged students (Mac Iver & Epstein, 1990).

Building school membership is more easily achieved in smaller organizational arrangements which permit teachers to personalize their relations with students. Support from both peers and teachers enhances students' ability to build confidence, participate in academic and non-instructional activities, and become committed and connected to school goals and school practices. This support is particularly crucial in schools with high percentages of students whose personal and social backgrounds do not offer the social capital available to their more advantaged peer counterparts.

Method

An ex post facto design was used in this study. This study used a subsample of schools from a larger study of student social bonding. In the original study (Arhar, in

press), samples of eleven teamed and eleven non-teamed middle-level schools were matched on the variables of size of enrollment, percentage of minority students, percentage of students on free or reduced lunch, geographic location, and rural/urban location. In the sample of schools, enrollment ranged from 230 to 1160 students, minority percentage ranged from 3% to 64%, and the percentage of students on free or reduced lunch ranged from 1% to 55%. Six of the matched pairs were located in urban areas and five in suburban areas. Four geographic areas of the continental United States were represented: East, West, South, and Midwest. Within each sampled school, all seventh grade students were provided the opportunity to participate in the study. A total of 4,761 seventh grade students responded.

The participating students completed a demographic questionnaire and the Social Bonding Scale from the Wisconsin Youth Survey (Wehlage, 1989). The Social Bonding Scale consists of twenty-five Likert response items. The instrument yields three bonding scores, reflecting students' bonding to peers, to teachers, and to schools. Internal consistency reliability estimates for the three scales (Coefficient Alpha) were 0.69, 0.81, and 0.74 for the bonding to peers, teacher, and schools scales, respectively.

To determine the effect of school SES on the relationship between school organization, racial/ethnic group, socio-economic status, gender, and family structure and student social bonding, a subsample of seven teamed and seven non-teamed middle schools was analyzed. The low SES pairs (four matched pairs) were those in which 25% to 55% of the students received free and/or reduced lunch; the high SES schools (three matched pairs) were those in which only 1% to 10% of the students received free and/or reduced lunch. In this subsample of schools, response records were

deleted if data were missing on the demographic factors of student gender, racial group, socio-economic status, and number of parents in the home, as well as responses to the social bonding scales. For this subset of the original data, a total of 1,052 student responses were analyzed.

Results

The data were analyzed using multivariate analysis of variance. The student responses to the three bonding scales were the dependent variables. Five independent variables were analyzed: student gender, racial/ethnic group (White, Black, and other), socio-economic status (working class, lower-middle, and upper- middle), family structure (two-parent, one-parent, and other), and school organizational structure (teamed and non-teamed). Separate analyses were conducted for low SES schools and high SES schools. Because no statistically significant three-way or higher-order interactions were obtained for either high or low SES schools, the multivariate analysis was computed on main effects and two-way interactions only. The results for the high and low SES schools are presented in Tables 1 and 2, respectively.

For the High SES schools (Table 1), no statistically significant effects were obtained for any of the five explanatory variables, or two-way interactions between them. In contrast, in the Low SES schools (Table 2), statistically significant main effects were obtained for student gender ($F(3,1395) = 2.84$, $p<.04$), student racial/ethnic group ($F(6,2790) = 3.83$, $p<.01$), and school organization ($F(3,1395) = 5.74$, $p<.01$). In addition, a significant interaction was obtained between student gender and racial/ethnic group ($F(6,2790) = 2.58$, $p<.02$).

As a follow-up to the significant multivariate tests, univariate analyses of variance were computed for each bonding scale. Significant main effects for student gender were obtained on the School Bonding Scale ($F(1,1430) = 6.76$, $p < .01$), and on the Teacher Bonding Scale ($F(1,1430) = 7.15$, $p < .01$). For each of these scales, the mean bonding scores of female respondents were significantly higher than the mean scores of male respondents (Table 3). The mean School Bonding Score for female respondents was 26.14, while that for male respondents was 25.27. On the Teacher Bonding Scale, the mean score for female respondents was 25.72, while that for males was 24.42.

Significant univariate main effects for student racial group were obtained only on the School Bonding Scale ($F(1,1430) = 8.44$, $p < .01$). Means and standard deviations are presented in Table 4. Pairwise comparisons between racial group means were conducted using the Scheffé method. Results showed that the mean School Bonding Score for Black respondents (26.54) was significantly higher ($p < .05$) than the mean score for White respondents (25.50). No other pairwise comparisons were statistically significant.

Significant univariate main effects for school organization were obtained both on the Peer Bonding Scale ($F(1,1430) = 6.79$, $p < .01$), and on the Teacher Bonding Scale ($F(1,1430) = 13.88$, $p < .01$). On each of these scales, the mean score for students in teamed schools was significantly higher than the mean score for students in non-teamed schools (Table 5). On the Peer Bonding Scale the mean scores were 20.11 and 20.88 for the non-teamed and teamed schools, respectively. On the Teacher Bonding Scale, the mean scores were 24.20 and 26.12 for the non-teamed and teamed schools, respectively.

A significant univariate interaction between gender and

racial group was obtained only for the Peer Bonding Scale ($F(2,1430) = 3.98$, $p < .02$). Means and standard deviations are presented in Table 6. The multiple comparison follow-up tests revealed significant gender differences for the White respondents only (the cell means being 21.02 for White female respondents and 20.21 for White male respondents). No significant differences in means between males and females were obtained for either the Black respondents or the "other" respondents.

Discussion

In high SES schools, student gender, race, socio-economic status, family structure and school organization did not produce a significant effect on student social bonding to peers, teachers or school. In contrast, in low SES school, statistically significant main effects were found for student gender, racial group and school organization, as well as an interaction between race and gender. The high SES schools were characterized by a predominance of White, middle, and upper-middle class, two-parent families. The availability of social, fiscal and material capital outside of the school provides richer resources for student growth and development than what is available for students in low SES schools, where there is greater racial diversity, a greater proportion of low-income families, and over twice as many single parent families. Thus, the school itself may have a stronger influence on young adolescent bonding in low SES schools than on students in high SES schools through the kind of support that is provided by adults. Young adolescents will take nurturance where it can be found.

Within the low SES schools, student gender played a

role in the social bonding of students to their teachers and their school. Female students were more connected to their teachers and their schools than were their male counterparts. The faculty of most middle level schools is predominantly female. Students are more likely to look up to, model, and connect with those most like them. Thus, female students may form strong bonds with their female teachers, and through those teachers, find stronger attachments to the school itself. Male students, on the other hand, may feel the need to separate from female teachers as they seek to build identities away from the gender that has traditionally been their caregivers. The tendency for both boys and girls from grades seven through nine to intensify their identification with gender helps to explain why female students will bond with their teachers and why male students will not. Not acting like and associating with females is very important for young male adolescents (Simmons & Blyth, 1987).

School SES may also contribute to the effect of gender on social bonding. While scores of female students on bonding to school were the same in both high and low SES schools, the scores of male students in low SES schools are lower than their high SES school counterparts. These lower male scores in the low SES schools thus contribute to the difference in male and female scores in those schools. Male students in low SES schools may have fewer opportunities or less of an inclination to participate in school activities. On the other hand, the bonding of male students to their teachers is the same in both high SES and low SES schools, while female bonding to teachers is greater in low SES schools than in high SES schools. Teachers in low SES schools may go to greater lengths to connect with their female students and those connections may be more important

for students in schools serving higher proportions of at-risk youth.

Racial/ethnic group is also a factor contributing to student social bonding in low SES schools. In these schools, Black students were more bonded to their school than were White students. Low SES schools, characterized by a greater number of Black students than high SES schools, may provide a culture closer to the personal and social experiences of Black students. Such a culture may provide more opportunities for participation in school activities, governance structures and social life, thus responding to students' needs for affiliation and control of the events of their lives. Black culture in low SES schools, woven into the fabric of the school's culture, may stand in marked contrast to the culture experienced by Black students in predominantly White high SES schools. Black students in high SES schools were less bonded to their schools than were Black students in low SES schools, adding further support to this line of reasoning. It is interesting to note that the school bonding scores of White students remained constant in both high and low SES schools, adding further support to the importance of school in the lives of those students whose social capital deprives them of the support required for their social, personal and intellectual development. The finding that race did not contribute to a difference in student bonding to peers and teachers in low SES schools suggests that other programmatic features of the school needs to be examined.

The interaction between race and gender in low SES schools indicates that these two variables are intertwined. White female students were more bonded to their peers than their White male counterparts while no such gender differences were evident with Black or "other" students.

Peer culture in not as important for black adolescent females who have been found to be more family oriented than either White females or Black males (Coates, 1987).

Finally, school organization has an impact on student bonding to teachers and to peers in low SES schools. The absence of such an effect in high SES schools suggests that creating a smaller, family-like structure within a larger organization has potential for increasing the connectedness of at-risk students with their teachers and peers. This finding suggests that a program based on a "family" model in which a small group of teacher (in this study, generally four) take collective responsibility for planning and delivering the curriculum for a small group of students (generally one hundred to one hundred and twenty), and that stays together for at least one year has the potential to enhance student social bonding and membership. The nature of these bonds was not the focus of this study, but other studies of similar programs designed to provide personal and social support for at-risk students suggest that these bonds are characterized by trust, higher teacher expectations for students, greater sense of accountability for student learning on the part of teachers, and a teacher culture of mutual support needed to work with students at risk of school failure (Newmann, 1992).

A study by McPartland (1992) using the NELS:88 survey of over 24,000 eighth grade students also supports the findings that school organization has an impact on student bonding to teachers. McPartland's study found that highly departmentalized schools have negative effects on teacher-student relations and positive effects on academic achievement of eighth grade students. When the results were divided by SES, however, the high SES students benefitted academically the most from high levels of departmentalization

but suffered the most in teacher-student relations. For the lowest SES group, the positive benefits of specialized teachers on achievement found for all other groups shifted to negative on two of the four tests. He also found that the use of teams in highly departmentalized schools improved student-teacher relations and did not diminish the positive academic effects of departmentalization. He also found that teaming may actually improve academic achievement in social studies. Interdisciplinary teaming is advocated as a way to maintain an emphasis on academics within a context of student support.

The fact that the impact of teaming did not carry over to increase student bonding to school suggests that programmatic changes need to be deliberately linked to other efforts to ensure the inclusion of students in the culture of the school. Changes in organizational structure offer potential for increasing student membership and bonding. Teaming however, does not ensure such membership nor does it ensure a positive effect on student engagement and achievement. The effects of organizational changes are influenced by the beliefs, attitudes, and competence educators bring to their work with young adolescents and with one another. Interdisciplinary teaming, as with other proposed structural changes in schools, requires a strong commitment to and knowledge of valid educational content, the competence to deliver it, as well as commitment to teaching students of varying academic abilities.

Implications

From the perspective of students, active engagement in academics requires a basic sense of bonding with the school, with teachers, and with peers. From studies of successful

schools, Newmann (1992) outlines dimensions of schooling that promote membership. Achieving this quality "requires that schools communicate clear, noncontradictory purposes as the goals of education; that they treat students fairly; that they offer reliable personal support to help students undertake the hard and sometimes risky work of school; that they communicate high expectations and demonstrate accountability for the success of all students; and that these responsibilities be discharged in a climate of care that shows respect of all" (p. 183).

The principle of inclusion underlies all of these dimensions of membership. This principle would also guide school policies, practices, norms, and behaviors for those schools that seek to develop school membership. More specifically, as this study suggests, building a culture of inclusion requires that educators take into account many factors related to student personal and social background as well as structural features of the school. These factors should influence both the instructional and non-instructional program.

A key concern for educators, families and communities is the social capital available to students. Social capital consists of the support of individual adults who have the commitment and competence to care for young adolescents, as well as a network of adult support that can collectively solve problems (Coleman, 1988). The decline of those networks of support in many low-income communities poses problems for educators. While there is consistency and alignment between what parents and educators demand of students in high SES communities, low SES schools are subject to more problems of value conflict between the home, community, and the school (Metz, 1988, 1990). The higher the SES of the school, the higher the value placed on

education and the greater the demands on teachers to have high expectations of their students. The result is higher performance of the students. The lack of social support for students in low income communities requires that schools make additional efforts to be sensitive to community and parents while also offering stronger social support for students in school.

This study suggests that interdisciplinary teaming may not impact student social bonding in all schools. Teaming appears to have the strongest impact on student-teacher relationships in low SES schools. While this finding supports other research that indicates the critical role played by teachers in low-income schools, this does not suggest that teacher "niceness" to students will necessarily determine student success. An academic emphasis and high teacher expectations is also needed. Schools must examine their own structures and norms to determine their effect on teachers. Alienated and disempowered teachers cannot provide support for students. Organizing teachers into interdisciplinary teams does not ensure a more professional and collegial work life to teachers; however, it provides conditions that may reduce the alienation of teachers, as well as conditions that promote a greater role in school governance. Empowered, supported teachers are more likely to provide support for their students.

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Table 1

Multivariate Analysis of Variance on Student Bonding Scores in High SES Middle-Level Schools.

Source	Wilks' Lambda	F	df	p
Student SES (E)	0.998	0.28	6, 3116	0.946
Gender (G)	0.995	2.40	3, 1558	0.065
Racial/Ethnic (R)	0.996	0.90	6, 3116	0.487
Family Structure (F)	0.995	1.13	6, 3116	0.339
School Structure (T)	0.997	1.39	3, 1558	0.241
EG	0.995	1.10	6, 3116	0.358
ER	0.994	0.76	12, 4122.372	0.687
EF	0.993	0.88	12, 4122.372	0.559
ET	0.995	1.10	6, 3116	0.355
GR	0.996	0.86	6, 3116	0.522
GF	0.994	1.43	6, 3116	0.196
GT	0.998	0.56	3, 1558	0.640
RF	0.994	0.69	12, 4122.372	0.762
RT	0.995	1.12	6, 3116	0.346
FT	0.994	1.35	6, 3116	0.229

Table 2

Multivariate Analysis of Variance of Student Bonding Scores in Low SES Schools.

Source	Wilks' Lambda	F	df	p
Student SES (E)	0.997	0.62	6, 2790	0.713
Gender (G)	0.993	2.84	3, 1395	0.036
Racial/Ethnic (R)	0.983	3.83	6, 2790	0.001
Family Structure (F)	0.996	0.72	6, 2790	0.631
School Structure (T)	0.987	5.74	3, 1395	0.001
EG	0.997	0.69	6, 2790	0.656
ER	0.992	0.87	12, 3691.115	0.576
EF	0.990	1.07	12, 3691.115	0.377
ET	0.997	0.66	6, 2790	0.679
GR	0.988	2.58	6, 2790	0.016
GF	0.995	1.13	6, 2790	0.338
GT	0.997	1.00	3, 1395	0.389
RF	0.989	1.17	12, 3691.115	0.294
RT	0.998	0.35	6, 2790	0.909
FT	0.993	1.42	6, 2790	0.200

Table 3

Means and Standard Deviations on the Social Bonding Scales for Male and Female Students in High and Low SES Middle-Level Schools.

High SES Schools

Student Gender	N	Bonding Scale: Peer MN	Peer SD	School MN	School SD	Teacher MN	Teacher SD
Female	281	21.72	2.78	26.30	4.17	25.08	4.74
Male	295	20.58	3.19	25.23	4.71	23.94	5.30

Low SES Schools

Student Gender	N	Bonding Scale: Peer MN	Peer SD	School MN	School SD	Teacher MN	Teacher SD
Female	240	20.95	3.33	26.45	4.67	25.89	5.50
Male	236	20.32	3.54	24.55	5.25	24.02	5.75

Table 4

Means and Standard Deviations on the Social Bonding Scales by Student Racial Group in High and Low SES Middle-Level Schools.

High SES Schools

Racial/Ethnic Group	N	Bonding Scale: Peer MN	Peer SD	School MN	School SD	Teacher MN	Teacher SD
Black	34	20.14	3.58	25.35	4.05	23.67	5.78
White	483	21.30	2.98	25.86	4.57	24.62	5.00
Other	59	20.40	3.07	25.14	3.97	23.91	5.15

Low SES Schools

Racial/Ethnic Group	N	Bonding Scale: Peer MN	Peer SD	School MN	School SD	Teacher MN	Teacher SD
Black	93	19.99	3.67	27.14	4.29	25.46	5.75
White	353	20.84	3.25	25.28	5.06	24.92	5.65
Other	30	20.20	4.67	23.16	5.75	23.96	6.08

Table 5

Means and Standard Deviations on the Social Bonding Scales for Students in High and Low SES Teamed and Non-teamed Middle-Level Schools.

High SES Schools

School Organization	N	Bonding Scale: Peer MN	Peer SD	School MN	School SD	Teacher MN	Teacher SD
Non-teamed	259	21.00	3.04	25.70	4.62	24.37	5.26
Teamed	317	21.25	3.05	25.80	4.37	24.60	4.90

Low SES Schools

School Organization	N	Bonding Scale: Peer MN	Peer SD	School MN	School SD	Teacher MN	Teacher SD
Non-teamed	279	20.24	3.65	25.28	5.01	24.27	5.52
Teamed	197	21.20	3.07	25.83	5.10	25.94	5.82

Table 6

Means and Standard Deviations on the Social Bonding Scales by Student Racial/Ethnic Group and Gender in High and Low SES Middle-Level Schools.

High SES Schools

Racial/ Ethnic Group	Gender	N	Bonding Scale: Peer MN	Peer SD	School MN	School SD	Teacher MN	Teacher SD
Black	F	17	20.52	2.91	25.94	4.52	25.76	5.22
Black	M	17	19.76	4.20	24.76	3.56	21.58	5.69
White	F	233	22.02	2.64	26.46	4.25	25.17	4.71
White	M	250	20.62	3.12	25.29	4.79	24.11	5.22
Other	F	31	20.09	3.03	25.30	3.28	24.00	4.73
Other	M	28	20.75	3.13	24.96	4.67	23.82	5.67

Low SES Schools

Racial/ Ethnic Group	Gender	N	Bonding Scale: Peer MN	Peer SD	School MN	School SD	Teacher MN	Teacher SD
Black	F	49	19.60	3.83	27.53	4.38	25.66	5.95
Black	M	44	20.43	3.48	26.71	4.19	25.23	5.59
White	F	177	21.34	2.91	26.25	4.69	26.10	5.30
White	M	176	20.35	3.50	24.31	5.25	23.73	5.76
Other	F	14	20.78	5.17	25.28	5.01	24.00	6.37
Other	M	16	19.68	4.28	21.31	5.86	23.93	6.03

Authors' Notes

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